TRANSACTIONS

OF

THE LINNEAN SOCIETY.

I. *Observations on the Genus* Derbe *of Fabricius.* *By* J. O. Westwood, *Esq., F.L.S., &c.*

Read December 1st, 1840.

THE insects composing the Homopterous order or suborder certainly exhibit the most extraordinary variations of form which are to be met with in this class of beings. Amongst a portion of these insects we trace two modifications: in a very great number, composing the subfamily *Membracides*, we find the prothorax enormously developed, and presenting an almost endless variety of appearance, and the head small; whilst in many of the family *Fulgoridæ* the head is the portion of the body which is subjected to an increased development. Having illustrated the typical genus of the latter of these two groups in a memoir which has been honoured by a place in the Society's Transactions, I purpose in the present paper to investigate another genus belonging to the same group, which, although not presenting so extraordinary an appearance as the true *Fulgoræ*, is, nevertheless, interesting both on account of several portions of its structure, and from the circumstance of its intimate connexion with the two groups established by Mr. Kirby in the Transactions of this Society under the names of *Otiocerus* and *Anotia*, both of which, and more especially the latter, continue so rare, that even in the most recent works upon the order we find scarcely any addition made to the information contained in the memoir

of the reverend author. In describing these two genera, Mr. Kirby pointed out their relationship both to *Fulgora* and *Delphax*, omitting, however, all mention of the Fabrician genus *Derbe*, which is far more nearly allied to them than either of the two genera which he notices. The genus *Derbe* was, however, evidently unknown to him, as it was also to Latreille and most subsequent authors. In the 'Systema Piezatorum' this genus is composed of eight species, seven being inhabitants of South America, whilst the eighth is a native of New South Wales, and was described from the Banksian collection, now in the possession of this Society. Such, however, is the rarity of the species of which this genus is composed, that no individual belonging to it existed until very recently in the collections at Paris, nor am I aware of any other specimen in our English collections, except those in my own cabinet, subsequently described.

In 1832, M. Perchéron, a Parisian entomologist, who has especially directed his attention to the *Homoptera*, *Neuroptera*, and other neglected orders of insects, being desirous of obtaining a more perfect acquaintance with the genus than is to be gained from the Fabrician description, applied to M. Westermann of Copenhagen, by whose kindness he was enabled to publish a figure of the Fabrician specimen of *D. pallida*, in M. Guérin's 'Magasin de Zoologie.'

It happens unfortunately, however, that the species thus illustrated does not accord with the typical species of the genus, which therefore still remains unfigured. Subsequently M. Boheman, instigated by the same desire of reinstating this genus in its proper situation (and evidently unaware of M. Perchéron's figure), published a memoir in the Transactions of the Royal Academy of Sweden for the year 1837, in which he described several African species which he considered to belong to the genus, but which also differ as greatly from its true type as the species figured by M. Perchéron†.

On various previous occasions I have endeavoured to establish a fixed prin-

† Since this Memoir was read, the Marquis Spinola has published a very elaborate Memoir on the *Fulgoridæ*, in the 'Annales de la Société Entomologique de France,' for 1839, in which he forms the genera *Derbe* (describing, ex visu, *D. pallida*, figured by Perchéron), *Otiocerus* and *Anotia*, into a distinct subfamily, which he terms *Derböides*. These are the only groups in the subfamily with which he was acquainted, and of which the structure of the different parts of the head is principally employed, (as it is throughout his memoir,) for the discrimination of the different genera.—J. O. W., February 1842.

ciple relative to the selection of the *typical* species in genera, established by our predecessors, which combined several distinct forms under one generic name. For this purpose, I have considered that the species which could be proved to have been more especially under the examination of the founder of such genera, ought to retain the old generic name; and where this could not be learned from any particular expression, that we should resort to the first species in the genus. In the writings of Fabricius we almost invariably find that he had particularly examined one species in each genus, as he adds a detailed description of the various organs of its mouth to the description of the species, instead of giving it amongst the generic characters. In such case, it appears to me clear that we ought always to consider that insect as the type of the genus; and it further happens, (which is not always the case in other genera,) that in the genus *Derbe* the species thus determined as the type stands at the head of the genus; so that in this and other analogous cases there is no ground for our conferring the old generic name on any of his species, which, in our modern view of such groups, does not accord with the actually determined type. These observations must of course be regarded as bearing upon the subject independently of the *natural* arrangement of objects, whereby it may happen that the species thus selected as the type of a genus may not be its *natural* type; but still the advantages to be gained by adopting a uniform method in dealing with these old generic names are so great, that naturalists will doubtless join with me in preventing, as far as possible, a still further increase of the confusion in the nomenclature of generic groups.

The type of the genus *Derbe* is evidently, therefore, this first Fabrician species, namely, *D. hæmorrhoidalis*, a South American insect, to which is referred by Fabricius (but with an expression of doubt) Stoll's figure 160, which represents a species from Surinam, but which is regarded by Dr. Klug as distinct, under the name of *D. nervosa* (Burmeister, 'Handb. d. Entomol.' ii. p. 154). These two species, with the two others subsequently described, constitute a distinct group, for which I consider that the typical generic name *Derbe* ought to be retained, and the insects themselves to be regarded as the types of the higher group or subfamily to which they belong.

The insect figured by M. Perchéron (*D. pallida*, Fab.), although agreeing with these typical species in the structure of the head, rostrum and antennæ,

is at once distinguished from them by the structure of its wings, which are pulverose, its short feet, and its generally weak form.

I possess two other species which agree with the typical species in their generic characters, and of which the following are descriptions.

Derbe semistriata. *Westw.*

Tab. I. Fig. 1.

Lutco-fulva; alis pallidis costâ magis fulvescenti venis nigricantibus strigisque tenuibus fuscis inter venas (nisi in cellulis apicalibus) dispositis.

Expans. alar. lin. 16½ (mens. Angl.).

Habitat in Brasiliâ. In Mus. Westw.

Caput pallidum albido-luteum; *antennis* oculis et rostro concoloribus. *Collare* albido-luteum. *Mesothoracis* dorsum fusco-luteum, medio obscurius, posticè pallidius, maculis duabus parvis rotundatis nigris versus angulos posticos. *Tegulæ* fuscæ. *Scutellum* pallidum. *Pedes* luteo-albidi. *Alæ* nitidæ pallidè lutescentes; costâ anticarum magis fulvescente, in medio et ante incisionem ordinariam fuscâ, venis nigricantibus strigisque tenuibus fuscis inter venas dispositis, at in cellulis longitudinalibus apicalibus haud aut vix obviis; alæ posticæ strigis nonnullis in angulo externo, cellulâ anticâ discoidali venas tres ad apicem emittente, posticâ unicam tantùm.

Derbe strigipennis. *Westw.*

Tab. I. Fig. 2.

Pallidè fusco-lutea; thoracis dorso carinâque faciei sanguineis, alarum venis fuscis strigis tenuibus fuscescentibus inter omnes venas ad apicem alarum currentibus, pedibus albidis.

Long. corp. lin. 3. Expans. alar. lin. 14. (mens. Angl.).

Habitat in Brasiliâ apud Rio Janeiro. In Mus. Westw.

Caput obscurè sanguineum, facie ante oculos nigricanti carinâ sanguineâ, clypeo rostro antennisque lutescentibus, rostro ad medium usque abdominis extenso. *Collare* luteo rufescens; mesothoracis dorso sanguineo, posticè luteo, maculis duabus parvis rotundatis nigris ad angulos posticos; scutello metathorace abdomineque luteo-fuscis, margine postico segmentorum posteriorum rufescente. *Pedes* elongati graciles, pallidè luteo-albidi. *Alæ* nitidæ pallidè fusco-luteæ, venis fuscis strigisque tenuibus fuscescentibus in medio membranæ inter omnes venas et usque ad apicem alarum extensis, cellulâ anticâ discoidali alarum posticarum ad apicem venas duas emittente, cellulâ posticâ etiam duas.

Obs. Insertio venarum in medio alarum anticarum paullò irregularis. In alâ dextrâ cellula angusta basalis ad apicem emittit venam post venam bifidam (ut in fig. 2 A†), et venæ duæ proximæ sunt longitudinales (*o* et *) et disjunctæ. In alâ sinistrâ (fig. 2 B) cellula basalis angusta versus apicem venam bifidam tantùm emittit; vena proxima longitudinalis (fig. B†) cum venâ parvâ transversâ venæ postcostalis conjuncta est; venæque proximæ duæ longitudinales sunt (fig. B, *o* et *), attamen ante originem conjunctæ.

Under the name of *Mysidia* I propose to arrange such of the South American species of these insects as have hitherto been described under the generic name of *Derbe*, but which differ from the typical species of the genus in various respects, as indicated in the following contrasted characters of the two groups, although they agree together in being exclusively inhabitants of South America.

Mysidia.	Derbe.
Statura debilis.	*Statura* robustior.
Pedes breviores.	*Pedes* longi graciles.
Rostrum ultra pedes posticos haud extensum.	*Rostrum* ad medium abdominis extensum.
Antennæ longitudine mediocri.	*Antennæ* breviores.
Oculi rotundati.	*Oculi* subrotundati haud emarginati.
Alæ breviores, latiores, teneræ, pulverosæ; *anticæ* integræ ad apicem rotundatæ; *vena mediastina* (fig. 3 A, *a*) bifida, ramo ejus antico ramulos nonnullos obliquos versus apicem emittenti, ramo postico ad apicem bifido; *vena postcostalis* (fig. 3 A, *b*) ad apicem trifida, venasque duas alias longitudinales pone medium bifidas in medio posticè emittens; *vena mediana* (fig. 3 A, *c*) ramos tres emittens, ramo medio bifido.	*Alæ* longiores, angustiores, nitidæ; *anticæ* ad costam ante apicem incisæ, membrana pone incisionem ramis tribus venæ mediastinæ curvatæ percursa; membrana reliqua venis numerosis regularibus longitudinalibus in medio venis transversis conjunctis percursa; *vena mediastina* (fig. 1 A, *a*) bifida, ramo antico ad apicem 4-ramuloso, postico ad apicem bifido; *vena postcostalis* (fig. 1 A, *b*) pone medium bifida, ramo antico bis bifido, postico bifido; *vena mediana* (fig. 1 A, *c*) ramos 10 longitudinales emittens, quorum tertius e basi bis bifidus.
Alæ posticæ venâ postcostali bifidâ aut trifidâ (Tab. I. fig. 3, 4, B, *z*).	*Alæ posticæ* venâ postcostali quadrifidâ (fig. 1, E, *z*).

I have found it exceedingly difficult to refer the very variable arrangement of the veins of the wings of these insects to a primary type; although it will appear quite evident, from the figures given in the accompanying plates, that the species of each subgenus agree in the general character of the veining of the wings, thus proving the value of this character. It appears to me, however, that we are able to trace the mediastinal, postcostal, median and anal great veins in some of these insects, although in others one or more of them become so modified as to seem lost, or to have sunk into mere branches of one of the others. The fore-wings of the three species of *Mysidia*, represented in Tab. I. fig. 3, 4 and 5, agree in the main arrangement of the veins; and it will be observed that these wings are comparatively short and broad, but the fore-wings of the typical species of *Derbe* are very much elongated, and are consequently furnished with a greater number of veins; there being, in fact, six longitudinal branches added. If, however, that portion of the wing of *D. semistriata* which is shaded in fig. 1 D, *x*, were to be cut out and inserted into the wing of *Mysidia*, in the situation indicated by the mark *x*, in fig. 3 A, the two wings will be found to be exactly alike in the veining; in other words, the part of the wing shaded in *Derbe semistriata* is supplemental, if I may so speak. It is moreover to be observed, that the posterior branch of the postcostal vein of *Mysidia*, indicated by the letter *o* (fig. 3 A), seems transformed into the true anterior branch of the median vein in *Derbe semistriata* (fig. 1 D, *o*). The normal condition of this vein in *Derbe* is still, however, indicated by the small transverse vein (*q*), which connects the postcostal and median veins; for on looking alone at the wing (fig. 1 D), it would be immediately concluded that the veins *o* and *o o*, and the several veins between them, are all branches of the great median vein C, and thus the little transverse vein *q* is but a supplemental one, giving support to these longitudinal veins. On looking, on the other hand, at the wing of *Mysidia pallida* (fig. 5), the vein *o* is found to be quite independent of the postcostal vein, forming a branch of the median vein much curved at its base (*p*), and only wanting the little transverse vein *q* to identify it with the wings (fig. 3 A and 4 A). On looking, then, at these two wings, we should immediately be led to conclude that the vein *o* was a posterior branch of the postcostal vein, the small vein *q* here becoming oblique, so as to form the true base of the longitudinal

vein *o*, and to be connected with the outer branch of the median vein by a branch *p*, which is but in fact the modified base of the branch *o*, supposing that branch to be postcostal and not median. By adopting this view, we should arrive at the conclusion that the branch *o* in *Derbe semistriata* is postcostal, its true base being the short branch *q*, and that the other longitudinal veins in the shaded part of the wing (1 D *x*) are also postcostal.

The following species belong to the subgenus *Mysidia*.

Derbe pallida, Fabr. (Perchéron, Mag. de Zool. Ins., pl. 36).
D. squamigera, Fabr. ("Statura omninò præcedentis," *Fabr.*).
D. costalis, Fabr. ("Statura præcedentium," *Fabr.*).
D. punctum, Fabr.
D. testacea, Fabr.
D. nivea, Fabr.

I am in doubt respecting the three latter species, *D. punctum* being described as having elongated wings, although it agrees with my species in colour, and in having a black spot. *D. testacea* is described as of the "statura præcedentis." *D. nivea* agrees with mine in having the wings "teneris niveis," but they are immaculate.

The two following species also belong to this subgenus.

Mysidia albipennis. *Westw.*

Tab. I. Fig. 3.

Parva tenera; alis albis: anticis puncto parvo ante medium costæ punctis nonnullis ad marginem internum venis transversis punctoque ante apicem nigris lunulis parvis fuscis marginalibus.

Long. corp. lin. 2. Expans. alar. lin. 8. (mens. Angl.).

Habitat apud Veram Crucem Americæ Æquinoctialis. In Mus. Westw.

Corpus totum albidum; *oculis* lutescentibus; *antennis* concoloribus. *Collare* album, maculâ parvâ purpureâ utrinque ad marginem anticum. *Tegulæ* albæ. *Abdomen* et genitalia concoloria. *Pedes* etiam albidi; tibiis anticis annulo fuscescenti ad basin alteroque ad apicem. *Alæ* tenerrimæ, albæ, pulverosæ, translucidæ, et parùm iridescentes, venis pallidis; *anticæ* puncto nigro parvo rotundo ante medium costæ; venâ parvâ transversâ (venam mediastinam et postcostalem conjungenti); basi ramorum duorum venæ post-

costalis, puncto rotundo ad basin furcæ apicalis trifidæ venæ postcostalis, venis quatuor transversis discoidalibus, punctisque quatuor marginis interni nigris; *posticæ* puncto parvo inter venam medianam et primam analem venâque transversâ versus apicem nigris; lunulâ parvâ fuscescenti inter omnes venas ad marginem posticum alarum omnium. *Vena* postcostalis alarum posticarum apice bifida.

Mysidia lactiflora. *Westw.*

Tab. I. Fig. 4.

Luteo-albida; vertice collarisque margine antico parùm sanguineis, hujus tegularumque marginibus posticis albis, alis albis margine antico lutescenti basin versus maculis tribus parvis maculâque majori ante apicem nigris.

Long. corp. lin. $2\frac{1}{2}$. Expans. alar. lin. $12\frac{1}{2}$. (mens. Angl.).

Habitat in Brasiliâ. In Mus. Westw.

Tota lutescenti-albida; *capite* parvo; oculis fuscis; vertice parùm sanguineo; antennis longis, albis. *Collare* album, margine antico luteo-sanguineo. *Tegulæ* magnæ, posticè albæ. *Mesothoraæ* posticè albus. *Pedes* omnes albidi. *Alæ* albæ, apicem versus albido tinctæ, pulverosæ, parùm translucidæ, venis pallidis; *anticæ* costâ luteo-albidâ, punctis tribus nigris ante medium, punctis duobus minutis ante apicem in ramis trifidis apicalibus venæ postcostalis, punctoque majore rotundato in venâ transversâ ramos duos posticos venæ postcostalis conjungente, nigris, venis tribus transversis discoidalibus fusco-tinctis, maculâ parvâ nigrâ versus marginis interni basin; *alæ posticæ* venis duabus transversis punctoque parvo versus angulum analem nigris, venâ postcostali ad apicem bis bifidâ.

The last of the Fabrician species of the genus *Derbe*, *D. elongata*, is an inhabitant of New Holland, and recedes so much from the type of the genus, especially in the form and veining of the wings, that it is necessary to establish a distinct subgenus for its reception. This insect was described by Fabricius from the Banksian cabinet, now in the possession of the Linnean Society, in which are preserved three specimens, from which the accompanying figure is taken. The following characters distinguish it from the other subgenera of this group.

Diospolis. *Westw.*

Lydda, Westw. in Proc. Linn. Soc., p. 84.

Rostrum brevius quam in *Derbe* typicali. *Antennæ* breves. *Alæ* anticæ longissimæ, angustissimæ, apice rotundatæ. Directio venarum anomala; regione venæ medianæ minimâ (Tab. II. fig. 1 *c*.) aut potius ejus rami *** in ramos venæ postcostalis (fig. 1 *b*.) transformati; ramo litterâ *o* indicato ramo *o* subgeneris *Mysidiæ* (meo judicio) analogo.

Diospolis elongata.

Tab. II. Fig. 1.

Derbe elongata, Fabr. Ent. Syst. iv. 34. Syst. Piez. p. 82.

Long. corp. lin. 2. Expans. alar. lin. 8. (mens. Angl.).

Habitat in Novâ Hollandiâ. In Mus. Soc. Linn. Lond.

Fulvo-flavescens. *Caput* concolor pallidum; oculi fusci. *Antennæ* pallidæ. *Rostrum* obscurè sanguineum. *Collare* flavo-fulvescens utrinque pone oculos rufum. *Mesothorax* flavo-fulvescens, lineis duabus tenuibus mediis posticè coalitis lateribusque rufis, scutello pallido lateribus rufis. *Abdomen* fusco-fulvum, lineâ mediâ punctisque in lineis quatuor dispositis pallidis; genitalia pallida. *Alæ* anticæ pallidè luteo-fulvæ, margine interno pallidiore, venis transversis venarumque longitudinalium basi apiceque fusco-tinctis; alæ posticæ parvæ pallidiores. *Pedes* concolores, apice tarsorum fusco.

In the Transactions of the Royal Academy of Sweden for 1837 ('Kongl. Vetenskaps Academiens Handlingar,' Holm. 1838) M. Boheman has published a memoir, entitled 'Observationes in *Derbe* genus unà cum specierum quinque novarum descriptionibus.' The five species described in this memoir are inhabitants of Sierra Leone, and materially differ from the typical species of *Derbe* as well as from the other subgenera above described, with none of which, indeed, was M. Boheman acquainted. These five species were divided by M. Boheman into two sections, which the author suggested might easily be considered as subgenera. In the elongated form of the wings they agree with the typical species of *Derbe*; but the paucity of the veins gives them a nearer relation to *Mysidia*, and especially to *Diospolis*, from which genera, however, both the sections are quite distinct.

The following characters distinguish the first of M. Boheman's sections from the other subgenera of the group: I propose to name it

Thracia. *Westw.*

Antennæ capite ferè duplo longiores, basi approximatæ. *Oculi* orbiculati, integri. *Ocelli* nulli? *Rostrum* pectore longius. *Clypeus* dorso tricarinatus. *Tibiæ posticæ* medio subcalcaratæ. *Alæ* anticæ longissimæ, angustæ, apice truncatæ, venis 12 longitudinalibus inter angulum apicalem et analem, venâ mediastinâ (Tab. II. fig. 2 B, *a*) ad apicem bifidâ (*a* *). Vena postcostalis ultra medium alæ irregularis, apice bifida, posticè ramos quatuor emittens (rami sex postcostales 2 B, *b* *); vena mediana (2 B, *c*) posticè ramos tres emittens (vena et rami mediani 2 B, *c* *); venæ alarum posticarum venis brevibus transversis conjunctæ.

Thracia sinuosa. *Westw.* (Derbe sinuosa. *Boheman*).

Tab. II. Fig. 2.

Fuliginosa; rostro pedibusque pallidè testaceis, alis anticis vittâ costali sinuosâ fuscâ serieque punctorum fuscorum.

Long. corp. alis clausis lin. 7. Paris.

Habitat in Sierrâ Leonâ. Mus. D. Schönherr.

Thracia Bohemanni. *Westw.* (Derbe nervosa. *Boheman*).

Corpore subtùs pedibusque flavescentibus, abdominis lateribus anoque rufis, hemelytris pallidè fuscis nervis costalibus sanguineis reliquis albo-fuscoque punctatis.

Long. 5 lin.

Habitat in Sierrâ Leonâ. Mus. D. Schönherr.

Obs. Hæc species cum *D. nervosâ*, Kl. Burm. haud confundenda.

The other African species, described by M. Boheman as constituting his second section of *Derbe*, differ materially from those of his first section, as, indeed, he has justly observed; I have accordingly considered them as forming another subgenus under the name of

Phenice. *Westw.*

Antennæ capite manifestè breviores, basi remotæ. *Oculi* oblongi vel obovati, pro antennis distinctè emarginati. *Ocelli* distincti, ad latera frontis sub oculis positi. *Clypeus* ut in *Thraciâ*. *Rostrum* pectore vix longius. *Alæ* anticæ quam in *Thraciâ* breviores, apice subrotundatæ, venis ferè ut in *Mysidiâ* dispositis, 12 longitudinalibus ad margi-

nem posticum inter angulum apicalem et regionem analem. Vena mediastina apice bifida (Tab. II. fig. 3 B, *a*); vena postcostalis (*b*) ad apicem deflexa etiamque bifida, ramos tres longitudinales posticè emittens, quorum ramus *o* manifestè analogus ramo *o* in figuris *Mysidiæ* et *Derbe*; vena mediana (*c*) ramos tres posticè emittens. [Ramulus litterâ *z* notatus, quamvis primo intuitu pro ramo venæ postcostalis haberi possit, evidenter ramulum medianum *z* in figurâ *Mysidiæ lactifloræ* representat; in *Phenice* tamen ramulus minutus ante medium adjectus est, e venâ postcostali emissus et ramo mediano continuus, unde ramus *z* postcostalis videtur potiùs quam medianus.] *Alæ* posticæ absque venis transversis.

Phenice fritillaris. *Westw.* (Derbe fritillaris. *Boh.*).

Nigra; rostro pedibus pectorisque lateribus flavis, capitis carinâ pallidâ fusco-punctatâ, hemelytris alisque albis nigro tessellatis.

Long. alis clausis 3½ lin.

Habitat in Sierrâ Leonâ. Mus. D. Schönherr.

Phenice fasciolata. *Westw.* (Derbe fasciolata. *Boh.*).

Tab. II. Fig. 3.

Pallidè flavescens immaculata; pedibus concoloribus, abdominis lateribus luteis, hemelytris albis, fasciis irregularibus lætè fuscis.

Long. alis clausis vix 4 lin.

Habitat in Sierrâ Leonâ. Mus. D. Schönherr.

Phenice stellulata. *Westw.* (Derbe stellulata. *Boh.*).

Corpore fusco-rubricante; capite antennis pedibusque pallidis, hemelytris fuliginosis albo-punctatis; nervis costalibus sanguineis.

Long. alis clausis vix 3 lin.

Habitat in Sierrâ Leonâ. Mus. D. Schönherr.

On reviewing the characters of the five preceding subgenera, *Derbe, Mysidia, Diospolis, Thracia* and *Phenice*, we find that, notwithstanding the great variation in the form of the wings and the arrangement of their veins, the size of the antennæ, &c., there are certain characters which they possess in common, which we must accordingly regard as those of the *genus*. These consist of, 1st, the minute size of the terminal joint of the rostrum; 2nd, the com-

parative paucity of the veins of the wings as compared with those of *Flata*, *Lystra*, &c.; 3rd, the unarmed posterior tibiæ; and 4th, the minute annular form of the basal joint of the antennæ, and the large size of the second joint. I would have added to these the presence of ocelli, but we have seen that these organs are apparently wanting in *Thracia*. Now we find these four characters equally strong in the genera *Otiocerus* and *Anotia* of Kirby, as well as in some other insects which are described below, all of which I consequently regard as subgenera of *Derbe*.

Otiocerus. *Kirb.* (Cobax. *Germar.*)

appears indeed to be destitute of ocelli; and the antennæ, especially in the males, are very anomalous, but in all other respects these insects are true species of *Derbe*. Mr. Kirby having given no representation of the rostrum, I have added a figure of the entire head of the female of *O. Degeeri*, Kirb., in which sex the antennæ are very short and bilobed (Tab. II. fig. 4 B). This species has the anal angle of the fore-wings dilated into an angular projection (fig. 4 A), and has been accordingly formed into a distinct genus by Dr. Burmeister under the name of *Hynnis rosea*; but it will be seen, on comparing the veining of the wings of this species with that of *O. Coquebertii*, Kirb. (of which I have also given an enlarged figure, Tab. II. fig. 5.), that the arrangement of the veins is almost identical; so that it will be necessary to suppress Dr. Burmeister's genus *Hynnis*.

The eyes in *Otiocerus* are emarginate, as they are also in *Phenice*, although in the typical species of *Derbe* they are almost round.

On comparing the wings with those of *Derbe* and *Mysidia*, it will be seen that the postcostal vein here acquires a more important character than in those subgenera, the median vein, although distinct, being nearer the posterior margin of the wing, and its apical branches occupying only the region of the anal angle; whilst the apical branches of the postcostal vein (*b**) extend through the widest central part of the outer margin of the wing. The species of *Otiocerus* are from the southern parts of North America.

Anotia. *Kirb.*

differs from *Derbe* in no material respect. Like *Otiocerus*, it has the eyes emarginate, and the ocelli appear to be obsolete; the antennæ, having the second

joint greatly elongated and emarginate at the top, do not materially differ from the typical character of the antennæ of the genus, whilst the veining of the wings, differing as it does from that of any of the other subgenera already described, can only be considered, as we have already seen, a character of subgeneric value. As in *Otiocerus* we find a similar apical branching of the mediastinal vein (Tab. I. fig. 6 A, *a*), the subcostal vein (*b*) arises from the mediastinal one, whilst the median vein (*c*) is of very inferior value. The strong vein *o* is evidently identical with the vein *o* of *Mysidia*, &c., although here it is quite unconnected with the little transverse vein *q*. It consequently here becomes a distinct branch of the postcostal vein. The large cell which it partly forms is irregular in the two fore-wings of Mr. Kirby's specimen of *A. Bonnetii*, (being the only individual I have seen of the subgenus, and from which the accompanying figures of the fore- and hind-wings are derived,) the left wing having only one branch emitted from its apex, whilst in the right wing there are two (fig. 6 B**).

A. Bonnetii is an inhabitant of Georgia in North America.

M. Guérin has figured an insect in his 'Iconographie du Règne Animal,' Insectes, pl. 58. fig. 13, under the name of *Anotia coccinea*, which he has described in the text of the 'Voyage de la Coquille' as an inhabitant of the Australian Archipelago, and which differs so materially from the type of the subgenus, especially in the veins of the wings, as well as their large size, that it will be necessary to establish a distinct subgenus for its reception: I propose to name it *Deribia coccinea*.

Under the subgeneric name of *Patara*, I propose to describe two minute insects, inhabitants of the West Indian islands, which are closely allied to *Anotia* in their general characters, and in the large size of the second joint of their antennæ; but in these insects this joint forms a very long, compressed and flat plate, of equal breadth throughout, and standing out from the head; and the veins of the wings are also quite differently arranged. The following are its technical characters:

Patara. *Westw.*

Caput mediocre, fronte in carinam parvam productâ. *Oculi* maximi, subtùs emarginati. *Ocelli* obsoleti. *Clypeus* magnus. *Rostrum* ad basin pedum posticorum extensum,

articulo penultimo elongato, ultimo minuto. *Antennæ* maximæ, articulo 1mo annuliformi, 2ndo maximo compresso, latitudine æquali, verrucoso, apice subtruncato et setigero. *Prothorax* brevis; tegulæ mediocres; abdomen subbreve, in maribus lobis duobus sublunatis convexis terminatum. *Pedes* graciles, simplices; tibiis posticis inermibus. *Alæ anticæ* longitudine mediocres, apice rotundatæ, venis paucis, cellulis tribus discoidalibus contiguis subquadratis inter venam postcostalem et medianam; vena mediastina bifida, ramo postico apice bifido, ramo postcostali per medium alæ currente (Tab. II. fig. 6 C, *b*) apice bis bifido (6*); vena mediana (*c*) ad apicem ramis ferè destituta, ramo ordinario *ó* cum venâ postcostali et medianâ venis brevibus *p* et *q* connexo, venâ postcostali cum medianâ venis duabus transversis versus alæ medium connexâ, cellulas quadratas supradictas formantibus.

Patara guttata. *Westw.*

Tab. II. Fig. 6 A.

Capite thoraceque fulvis, alis anticis griseo-fuscis margine omni albo-guttato.

Long. corp. lin. $1\frac{1}{4}$. Expans. alar. lin. $3\frac{1}{2}$.

Habitat in Insulâ S^ti^ Vincentii, Dom. Guilding. In Mus. Dom. F. W. Hope.

Caput fulvum, oculis antennisque nigricantibus. *Prothorax* et *mesothorax* fulvi, hoc lineis tribus dorsalibus notato. *Metathorax* et *abdomen* brunneo-rufa. *Pedes* pallidè lutescentes. *Alæ* anticæ disco griseo-fusco, margine omni albo-guttato, guttâ mediâ costali majori, apicalibus rotundatis; margine ipso tenuissimo, punctis inter guttas albas sanguineis; venæ discoidales obscuriores; alæ posticæ fuscescentes venis sanguineo-fuscis.

Patara albida. *Westw.*

Tab. II. Fig. 7.

Luteo-albida; antennis nigricantibus, alis anticis albis farinosis apicem versus fuscescenti tinctis guttis albis sanguineisque ornatis.

Long. corp. lin. 1. Expans. alar. lin. $2\frac{3}{4}$.

Habitat in Insulâ S^ti^ Vincentii, Dom. Guilding. In Mus. Dom. F. W. Hope.

Pallidè luteo-albida. *Caput* angustum; oculi magni, nigro-purpurei. *Antennæ* nigricantes, compressissimæ. *Thorax* totus concolor pallidus. *Pedes* albidi. *Abdomen* paullò obscurius, appendiculis duabus (♂ genitalibus) albidis. *Alæ* anticæ albæ, farinosæ, versus apicem pallidè fuscescenti tinctæ, venis tamen ad margines apicemque alarum guttis albis terminatis, punctis sex parvis marginalibus purpureis (scil. 2 apicali-costalibus majoribus et 4 apicalibus), venis duabus transversis discoidalibus fuscis, reliquis multò pallidioribus; cellulis 3 discoidalibus subquadratis, albis, nitidis, iridescentibus; venâ

primâ transversâ rectâ obscuriore ; cellulâ inter venam analem marginemque internum serie duplici tuberculorum fuscorum. *Alæ* posticæ albæ, venis paullò obscurioribus.

Another minute insect inhabiting the West Indies is the type of my subgenus *Cenchrea*, which differs from all the rest in the very minute size of the antennæ, the very slightly produced front of the head, and the form and veining of the wings. The following are its characters :

Cenchrea. *Westw.*

Caput transversum ; oculis magnis subtùs emarginatis. *Frons* parùm producta. *Ocelli* 2 sub oculos positi. *Antennæ* minutæ, in cavitatem circularem marginis lateralis prothoracis extensæ, articulo primo annulari, secundo brevi subrotundato tuberculato, setâ dorsali. *Rostrum* ad basin pedum posticorum extensum, articulo penultimo longo, ultimo minuto. *Prothorax* latus, lateribus dilatatis et ad angulum anticum semicirculariter elevatis. *Mesothorax* transversus, lineâ tenui mediâ elevatâ. *Abdomen* breve latum, lobis duobus terminatum. *Pedes* postici longi inermes. *Alæ* anticæ elongatæ, angulo antico apicali valdè obtuso, venis perpaucis longitudinalibus ; vena mediastina (Tab. II. fig. 8 C, *a*) pone medium bifida, ramo postico ad apicem bifido ; vena postcostalis etiam pone medium bifida, ramo antico bifido (*b**), ramo ordinario *o* † cum venâ postcostali medianâque venis minutis transversis *p* et *q* conjuncto.

Cenchrea dorsalis. *Westw.*

Tab. II. Fig. 8.

Pallidè testaceo-fulva ; alis anticis flavescentibus margine interno fuscis apice punctis duobus purpureis notato.

Long. corp. lin. $1\frac{1}{4}$. Expans. alar. lin. 5.

Habitat in Insulâ S^ti^ Vincentii, D. Guilding. In Mus. Dom. F. W. Hope.

Caput pallidum, medio magis brunnescens ; oculi magni nigri. *Thorax* pallidus, vittis longitudinalibus brunneo-fulvis. *Abdomen* fulvo-brunneum, apice pallido pulveroso. *Pedes* pallidi albidi. *Alæ* anticæ flavescentes, venis pallidis, margine externo lato fusco, strigâ parvâ obliquâ nigricanti pone medium costæ, maculis duabus purpureis in margine apicali ; alæ posticæ albæ, versus medium parùm infuscatæ, venâque furcatâ fuscâ, reliquis pallidis.

† This ramus ordinarius, *o*, is as troublesome to determine, as the analogous branch emitted from the middle of the extremity of the discoidal cell in butterflies.

EXPLANATION OF THE PLATES.

N.B. The same letters and marks are used throughout the figures to indicate such of the veins of the different wings as I consider to be the analogous representatives of each other.

Tab. I.

Fig. 1. *Derbe semistriata*, Westw.

A. The head with the frontal carinæ and antennæ seen from above and in front.

B. The head seen sideways.

C. The same seen from beneath.

D. The fore-wing. *a*. The mediastinal vein. *b*. The postcostal vein. *c*. The median vein. *d*. The anal vein. *o*. The representative of the outer branch *o* of the median vein of *Mysidia*. *q*. The small transverse vein connecting the postcostal and median veins, here forming, with *o*, a branch of the postcostal vein, the veins between *o* and *oo* being branches from this vein. The shaded part, *x*, represents the supplemental part of the wing not found in *Mysidia*.

E. The hind-wing.

Fig. 2. *Derbe strigipennis*, Westw.

A. A part of the right fore-wing, showing the regularity of the branches † *o* and *.

B. The left fore-wing, with the same branches similarly marked.

C. The hind-wing.

Fig. 3. *Mysidia albipennis*, Westw.

A. The fore-wing, with the principal veins marked as above. *b** Terminal branches of the postcostal vein. *x*. The situation where the portion of the wing shaded in Fig. 1 D. is omitted in *Mysidia*.

B. The hind-wing. *z*. The postcostal vein, simply bifid at the tip.

Fig. 4. *Mysidia lactiflora*, Westw.

A. The fore-wing. *o*. The terminal branch of the median vein, connected with the preceding branch of the same vein by the short branch *p*, but also at the same time so connected with the postcostal vein by the shorter branch *q*, as to appear rather as a branch of the latter than the former. *z*. The base of the second branch of the median vein.

B. The hind-wing.

C. Head seen sideways.

Fig. 5. Fore-wing of *Mysidia pallida*, Westw. *o*. The terminal branch of the median vein, being connected therewith by the curved base *p*, and quite distinct from the postcostal vein, the branch *q* being here obsolete.

Fig. 6 A. Fore-wing of *Anotia Bonnetii*, Kirb., the branch *o* being quite independent at its base either of the median vein *c*, or of the short branch *q*.

B. Part of the right fore-wing of the same, showing the two branches emitted from the apex of the large discoido-apical cell.

C. The hind-wing of the same.

Tab. II.

Fig. 1. *Diospolis elongata*, Westw. *** Longitudinal veins emitted from the postcostal vein, although analogous to the branches of the median vein of *Mysidia*.

Fig. 2. *Thracia sinuosa*, Westw.

A. Antenna.

B. Fore-wing, lettered as above. *a**. Terminal branches of the mediastinal vein. *b**. Terminal branches of the postcostal vein. *c**. Terminal branches of the median vein. *z*. The second branch of the median vein, but also connected with the postcostal vein by a short transverse vein.

C. Hind-wing.

Fig. 3. *Phenice fasciolata*, Westw.

A. Antenna.

B. Fore-wing, lettered as above.

C. Hind-wing.

Fig. 4 A. Fore-wing of *Otiocerus Degeerii*, Kirb., lettered as above.

B. Head of ditto, seen sideways.

Fig. 5. Fore-wing of *Otiocerus Coquebertii*, Kirb., lettered as above.

Fig. 6 A. *Patara guttata*, Westw.

B. Head of the same, seen sideways.

C. Fore-wing of the same, lettered as above.

D. Hind-wing of the same.

Fig. 7. *Patara albida*, Westw.

Fig. 8. *Cenchrea dorsalis*, Westw.

A. Head of the same, seen sideways.

B. Antenna extracted from the ear-like cavity at the side of the head.

C. Fore-wing, lettered as above.

D. Hind-wing.